

## BOTANICAL NAMES FOR ESSENTIAL OILS.

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**Over the years there has been an enormous push for utilising scientific terminology in aromatherapy. Unfortunately, few of the people promoting the use of Latin terminology have a working knowledge of the essential oil trade, or for that matter botany, horticulture and phytochemistry. Therefore, much misleading hype has become entrenched in teaching.**

I have been told by students from two well-known British aromatherapy schools that they were told: "You can't be an aromatherapist unless you know the correct Latin names of the essential oils". This is complete and utter nonsense, as I have not come across any aromatherapy school that knows the genuine botanical origin of even a fraction of their oils.

### **The reasons for Botanical names being unreliable when applied to essential oils are:**

Most plants used for essential oil production - wild, or cultivated - consist of numerous sub-varieties, cultivars, hybrids and clones. These can have massively variable chemical compositions, but can still have similar fragrances.

In the case of "wild crafted" (this means plants gathered from the wild), the chemical profile of their essential oils is unreliable. This is because in nature, wild plants exhibit enormous genetic variations. This genetic diversity evolves in nature as a species survival mechanism. If a disease breaks out, only some of the plants will be susceptible and die, while others with slightly different genes will survive. Many researchers have analysed essential oils from plants in the wild. Even when the plants only grow a few feet apart and may have common parents, the chemicals produced varied enormously in both volume and type. This is partly due to wind pollination where genes from different plants intermingle.

Very few essential oils come from 'wild crafted' plants'. In fact, this subject of gathering wild plants for commercial exploitation is something International Conservation organisations are in most cases, quite rightly, vehemently opposed to.

If you want to see what a nonsense it is applying Latin names to a given essential oil, then get hold of the following report. I use this in my classes to illustrate how botanical variants from a given species or variety make a nonsense of Latin names for essential oils: '*Preliminary Analysis of some Lavender and Lavandin Cultivars*'. Tucker A. *Et al. Perfumer & Flavorist Vol. 9. Aug./Sept. 1984. pp. 49-52.* In this report, they analysed the oils yielded by 12 cultivars from *Lavandula angustifolia*. Each cultivar is given its commercial name such as *L. angustifolia*, variety Nana alba. or *L. angustifolia*, variety Mitchum grey. The composition differences between these cultivars is massive, e.g. linalyl acetate in Hidcote variety is 56% but in Graves variety it is only 8%. Similar huge variations can be found in most of the other chemicals.

Due to the above, if you are told that an essential oil is "*Lavandula angustifolia*", it tells you nothing other than that the oil is from that particular species. **It tells you absolutely nothing about potential therapeutic activity.** As an example, in the report above, some oils have a similar profile to what the trade would consider lavandin, yet the plants are not hybrids like lavandin, they are true lavenders.

If you are taught that for example, "tea tree oil must be *Melaleuca alternifolia*", this is not strictly correct. There are a number of sub-varieties of *alternifolia* used for tea tree oil. This is why the Australian governments standard for tea tree oil does not just specify *alternifolia* but adds "oil of *Melaleuca*, terpinen-4-ol type".

Citrus trees are one of the better illustrations of the nonsense of Latin names applied to the products they yield. Most citrus trees **are grafted** in the same manner as **roses and jasmine**. Therefore, you have one variety as the head and another as the root. So what's the correct name for the oil or the oranges? When I was in Tunisia, we saw the way the trees were propagated; they simply cut the fruit in half, laid it on the sand and waited to see what came up. The resulting seedlings were then grafted using traditional knowledge; each tree will of course be slightly different. Anyone who has experienced a range of REAL Neroli oils, will know how the fragrance varies a lot between crops and from one location to another.

### So what can be made of all this:

If aromatherapy suppliers and teachers want to be pedantic about Latin names, **then ask them to get it right**. The oil should say something like *Lavandula angustifolia*, variety *Nana alba*, cultivar x, clone y. Of course, this will never happen for reasons given later.

Horticulturists and plant geneticists developing commercial crop plants do not like genetic diversity. This is because farming is now very much a mathematical science. They need to know what yield and quality they are going to achieve for all their hard work. In addition, many of the trades using the products from those crops insist on standardised materials. This standardisation of materials from commercial crops is not just applicable to your wheat, rice, carrots, etc. but applies equally to most commercially grown essential oil yielding plants.

Commercial developments in essential oil bearing crops have been going on for well over a century, with constant developments of commercially superior cultivars, and more recently clones. Aromatherapy training schools and the essential oil importers are years behind such developments. **The names they give oils are simply the norm in the trade and are not the actual botanical name of the plants used to produce the oil**. It is common that even the large essential oil importers cannot find out what variety of plants are being used in the country of origin. Bear in mind that the large customers for essential oils are not particularly interested in such matters. They want to know "what is the chemical composition", "how much is it per tonne", "can you keep up regular supplies". For a long time, there has been a total separation between commercial oil production and end users. Producers will grow their crops to meet the needs of their major customers in the food and fragrance trades, not aromatherapy suppliers.

Numerous aromatherapy suppliers will tell you that: "all our oils are grown by organic farmers, so we know what the plants grown are". There are indeed a small number of genuine growers that sell these oils, but the vast majority of such statements made by suppliers are lies.

It is well known by essential oils traders, that for example, the French export something like 10 times the amount of lavender oil they actually grow. Instead, they BLEND their oils with imported lavender, or more commonly with chemicals. So if the oil is blended, how on Earth can its Latin name be accurate?

In Egypt, which produces fabulous essential oils, it is common practice to blend oils from different parts of the country. This is done so that an acceptable fragrance is produced. The variety grown in one part may not be the same as in another part. The resulting blends are great, but the Latin naming again becomes almost meaningless.

### So if the Latin name is not accurate how can I tell what is in the bottle?

The only answer to that one is 'buyer beware'. The only way to tell if what is in the bottle is what it should be, is with proper chemical analysis. Certain chemical characteristics in essential oils can tell which geographical location it has come from. Other characteristics can tell you the age, others can tell if synthetic chemicals have been added.

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## So, what can we done to get suppliers to give accurate names to their oils?

I have not succeeded in stopping many in the trade calling Ho leaf oil, Ho wood oil. The reason I was given was "well that's what they have called it for the last hundred years". So, if they won't bother to get the origin of the oil right, i.e. wood or leaf, what hope is there that they will give you accurate botanical names? Answer: **none**.

## If the Latin name tells you little, what should the name on the bottle say?

As far as I am concerned, all the bottle needs to say is "Lavender oil", unless the oil is from a well-documented variety such as Lavandin. In EEC countries that would be illegal due to the idiots in the INCI names committees who don't even get the Latin names correct themselves! The INCI lists are misleading and inaccurate and it is a disgrace that such poorly constructed information has become part of European law. Such grossly inaccurate information emanating from EEC trade committees is now fast becoming part of National legislation.

In the case of oils with significantly different chemotypes, then this should be specified using chemical criteria such as: Rosemary 'cineol type', Rosemary 'verbenone type', Rosemary 'borneol type'. This chemical classification is particularly important for oils like thyme or orgegano where significant hazards could be associated with using the wrong oil.

How many times have you seen in popular aromatherapy books things like; 'cinnamon oil' **without defining whether it is bark or leaf**. It is interesting that these people who are now so insistent on the use of Latin names, sometimes don't even bother to define whether they mean cinnamon bark or cinnamon leaf oil. It is relatively common to find such gross deficiencies in literature, and sometimes even on essential oil bottles.

**Unfortunately, we have a trade that is overflowing with ill-educated people (on essential oils), who are constantly jostling for positions of influence and power. This is frequently done using phoney science, rather than good sound knowledge. Insistence on the use of misleading Latin nomenclature is but one example of many.**

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